REMARKS

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 1-15 and 18-26 were pending. By the present response, claim 26 has been amended, claim 25 has been canceled and claim 27 has been added. Thus, upon entry of the present response, claims 1-15 and 18-24 and 26-27 remain pending and await further consideration on the merits.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: the original claims and the specification, paragraph [0023] and paragraph [0041] and figure 3.

CLAIM REJECTIONS UNDER 35 U.S.C. §112

Claim 25 stand rejected under 35 U.S.C. §112, first paragraph on the grounds set forth in paragraph 5 of the Official Action. This rejection is moot because claim 25 has been canceled.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 1, 5, 13-14, 18, 21 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,497,737 to Philofsky (hereafter "*Philofsky*") in view of the collective teachings of U.S. Patent No. 3,157,449 to Hennessey (hereafter "*Hennessey*"), U.S. Patent No. 5,661,842 to Faust (hereafter "*Faust*"), and U.S. Patent No. 4,384,404 to Watine (hereafter "*Watine*"), and also in

view of U.S. Patent No. 5,793,130 to Anderson (hereafter "*Anderson*") on the grounds set forth in paragraph 7 of the Official Action.

What is presently claim is not the invention of a shrink-on sleeve with rectangular cross section, but rather a method for producing an insulated stator winding for rotating electrical machines using rectangular conductors. This is a new combination, which is not obvious by cited references, either alone or in combination.

For example, Philofsky in col. 2, rows 65-71 refers to Fig. 3 for the state of the art technology of insulating conductors, which is shown as wrapping insulation tape around these conductors. Applicants have previously submitted a contemporaneous reference (*Britsch et al.*, *Neidhöfer* and *Emery et al.*) to support this interpretation of Philofsky.

Also for example, Hennessey (US 3157449) illustrates a sleeve 66 (shown in figures 1 and 2) in a shrunk condition only, where due to the rectangular cross section of body 20 the sleeve automatically gets a cross section of the encased shape. The sleeve 66 might have rectangular inner and outer cross section, but Hennessey is silent on the geometry of the sleeve. Additionally, this sleeve is not even used to insulate, not to mention it does not insulate electrical conductors of rotating electrical machines. The sleeve surrounds one insulating body 20 (col. 1, row 32; cal. 1, row 61; cal. 2, row 24; cal. 2, rows 67-69). Thus the sleeve has no electrical functionality. Besides this, the materials available at the time of the invention in Hennessey (polyvinyl chloride, see col. 2, lines 29-31) were not capable to withstand the combined stress in electrical machines, as they soften at machine operation temperatures, generate detonating electrical losses and have a low electrical strength.

In another example, Faust (US 5661842) describes heat shrinkable tubes with circular cross sections, which are used to cover and insulate electrical joints of cables, in particular submarine cables. But Faust does not add any new information than already described within the description of the state of the art (see, for example, the discussion of manufacturing processes for encasing conductor bundles in cable technology at paragraph [0008] of Applicants' published specification). Although rectangular cross-sections of the tubes used for the coverings 20 and 25 are shortly mentioned within Faust (column 5, lines 8-13) this is a solution for cable connections only, i.e. for connecting of circular members. In contrast, the invention in the presently rejected claims is directed to rectangular shaped sleeves for rectangular shaped conductor bars of rotating electrical machines.

Watine (US 4384404) also is directed to a solution for cable connections only, i.e. for connecting of circular members. In addition in Watine, the covering function of the sleeve includes making an electrical connection by heat activated soldering during the shrinking process. However, in Watine the shape of the sleeve is mainly cylindrically. It is mentioned at column 3, lines 23-28, that the first sleeve may have any desired shape and that at least part of the first sleeve is substantively rectangular in cross-section. But Watine is silent as to which portion of the object the sleeve covers. From the figures it seems that the rectangular part may be that part of sleeve 1, which is definitely not in contact with the earth conductor 11. Further, the earth cable 11 disclosed in Watine is already insulated, so the motivation to provide a subsequent covering is questionable.

Anderson (US 5793130) does not describe the insulation process for rectangular conductors of rotating electrical machines. Anderson does not teach

insulating electrical conductors using a heat shrinkable sleeve. In fact, Anderson describes the use of a shrinkable sleeve in order to protect a device element from debris generated by the device, and not for use as electrical insulation. In this case, the sleeve has no electrical function. The fact, that the device element, which is protected from debris, is a stator winding is irrelevant. This device element could also be a switch, a capacitor, a resistor or any other element, which would need protection from debris. The insulation of the conductors is obviously done by another means; otherwise the winding would create short circuits, which would make the winding useless. Thus a simple plastic bag or other means would also have made the protection against debris. The heat shrinking tube only adds the advantage that it adapts to the shape of the element, but it is electrically of no function.

Additionally the shrink sleeve encapsulates the whole winding, which does not mean, that the electrical conductors (the wires) are insulated. The sleeve does not insulate one wire from another and does also not insulate the wire against the core of the winding, which is crucial for the main insulation of a stator winding. In addition the electrical strength against high voltage, as used in electrical machines, can not be reached by a construction as described by Anderson. Also, the heat shrinkable materials used for cable sleeves (polyolefins) are thermally not suited for the high temperatures as one will find in an operating electrical machine.

The Examiner argues that from Anderson it would be known to apply heat-shrinking tubes to stator windings. However, applying a heat shrinking tube in the same way as known from Anderson on the stator of a large rotating machine can not solve the problem of high voltage insulation of each single stator winding conductor,

which itself is made of a plurality of conductors (see paragraph [0003], sentence 1 of the published application). Covering each single winding conductor with the tube of Anderson is not obvious, not the least because the stator of Anderson is of completely different type, where the winding is not divided in conductor bars but consists of quasi-endless wires with no external access to apply any shrink-on sleeve.

Taking into account the state of the art and the disclosures in the cited references, it is respectfully traversed that the references teach what is alleged and also respectfully traversed that one of ordinary skill would combine the cited references in the manner proposed to arrive at the claimed invention.

For further example, since the primary reference Philofsky in fact describes a connecting means for the cooling system of an electrical machine (not the electrical insulation of such an electrical machine), it is not obvious, how one of ordinary skill at the time the invention was made should simply apply the heat shrinking tubes described by others, e.g., the heat shrinking tubes in the secondary references which have one or more of insufficient thermal properties, insufficient electrical properties, and/or were not applied to rectangular conductors of rotating electrical machines, to arrive at Applicants' claims.

From the above it is respectfully asserted that it would not have been obvious to the skilled artisan at the time the invention was made to apply the insulation sheath 19 of Philofsky as a heat-shrinkable sleeve having a rectangular cross-section, as also the collective teachings of Hennessey, Faust, and Watine, do not show the application of a heat-shrinkable sleeve with rectangular cross-sections on conductors with rectangular cross-section.

Since all the remaining rejected claims depend from independent claim 1, the rejections of these claims is also respectfully traversed for at least the same reasons as presented above with respect to claim 1. Withdrawal of these rejections is also respectfully requested.

Further comments on the rejected claims follow:

Independent claim 1 describes the shrinking of sleeves with defined (rectangular) cross section onto a different article (conductor bar) with a target/functionality (high voltage conductor bar insulation). In a preferred embodiment the sleeve might be heat shrinkable, as claimed in claim 5. Generally, claim 1 is not restricted to heat shrinkable sleeves, as only discussed by the Examiner. Heat shrinking shrink-on sleeves are only one of several preferred embodiments of the invention.

Regarding claim 5, the collective teachings of Hennessey, Faust, and Watine do not teach the application of an electrically insulating shrink-on sleeve with rectangular cross-section to the periphery of at least one electrically conductive conductor bar with rectangular cross section, shrinking the sleeve onto the conductor bar and building consequently an insulated stator winding with the applied sleeve fulfilling successfully the typical function of a stator winding insulation under combined high mechanical, thermal and electrical stress. Hennessey, Faust, and Watine independently describe heat shrinking of sleeves with no specified cross section onto different articles from electrically conductive conductor bar in order to reach different targets/functionalities.

Regarding claim 13, Philofsky teaches the conductor bar comprises individual conductors, but we do not claim the invention of a conductor bar with individual

conductors, but the application of said shrink-on sleeve on a conductor, which in a preferred embodiment consists of individual conductors in order to suppress eddy currents which would create unwanted losses.

Regarding claim 14, Philofsky is in fact silent as to temporarily connecting the individual conductors. It might have been obvious to one of ordinary skill in the art at the time the invention was made to connect the conductors because this would prevent them from moving around during shrinking of the sleeve, as the Examiner argues. But it would not have been obvious to make this connection temporary. Rather, stator bars of the state of the art at the time the invention was made had permanent connections between the individual conductors. We do not claim the invention of a temporary connection, but the preferred embodiment to use such a type of connection for the method claimed in clam 13 with the goal, to fix the individual conductors, but with the option of being able to open the temporary connection in order to bend the involutes without difficulty.

Regarding claim 18, Philofsky is in fact silent as to the dynamoelectric machine being a direct or alternating current machine. We do not claim the invention of a direct current or alternating current electrical machine, but claim one preferred embodiment of the method claimed in claim 1, which is its use on these types of machines.

Regarding claim 21, Philofsky depicts the state of the art of (in this case hollow) individual conductors for stators of rotating electrical machines having a rectangular cross-section. We do not claim the invention of stator conductors with individual conductors having rectangular cross-section, but claim one preferred embodiment of the method claimed in claim 13, wherein the conductor bar has at

least one individual conductor with rectangular cross-section. This alone distinguishes the present disclosure from solutions where only individual conductors with circular or other cross-sections are used, such as in cable technology.

Regarding claim 23, the collective teachings of Hennessey, Faust, and Watine do not teach a sleeve having a rectangular internal cross-section. As argued above, Faust and Watine clearly show a sleeve for insulating purposes as widely used in cable technology. Hennessey is silent on using a sleeve with rectangular or circular cross-sections or cross sections with other geometries. Figures 1-2 of Hennessey show the sleeve in shrunk position, where, due to the rectangular cross section of body 20 the sleeve automatically gets a rectangular cross section. There is no figure in Hennessey showing the sleeve in an unshrunk position, which could imply the usage of a sleeve with rectangular cross section.

Additionally the sleeve of Hennessey is neither used to insulate electrical conductors of rotating electrical machines nor is it used to insulate. The only functionality of the sleeve in this case is the (mechanical) protection of the connector-pins by surrounding them in the portion not shrunk onto the insulating body and the mechanical guidance of a second connector part which is to be plugged to the connector-pins of said first insulating body. Thus, Hennessey does not describe sleeves with rectangular cross-section and does not describe an electrical insulation method for stator conductor bars or for any type of conductors.

Faust and Watine describe an insulation method for cable technology (i.e. always conductors with circular cross-section) with sleeves clearly shown with circular cross-section as known from the state of the art. It is absolutely not obvious, how a person of ordinary skilled in the art of insulation of rotating electrical machines

should find a connection between the teachings of Hennessey, Faust and Watine in order to create a new method as presently claimed. Taking into account that simply combining the information disclosed in the cited references would end in a solution of no use for the task of electrically insulating the conductor bars for the stator of rotating electrical machines is simply further evidence that such a proposed modification is improper and that the claims in fact are not obvious over these cited references.

Claims 2-3, 6, 12, 15 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Philofsky*, the collective teachings of *Hennessey*, *Faust*, and *Watine*, and also *Anderson* as applied to claim 1 above, and further in view of the Admitted Prior Art in the specification of this present application on the grounds set forth in paragraph 8 of the Official Action.

Regarding claims 2 and 24, Applicants note that cable technology uses the so-called cold-shrink technology(see, paragraph [0009]). But, as already pointed out clearly, this technology was limited to articles with circular cross-sections like cables using shrink-on sleeves with circular cross sections. These shrink-on sleeves usually have a short axial length as used only at connection points or ends of such cables, and have large radial thicknesses in order to withstand the electrical stress in such devices.

The simple use of such shrink-on sleeves as known from the state of the art on conductors for rotating electrical machines would fail, as the circular cross-section, the short length and the thick insulation do not fit to the rectangular cross-

sections, the long axial extension and the small available space for insulation of the stator conductors in rotating electrical machines.

The newly claimed combination of using an insulating shrink-on sleeve with rectangular cross-section on the conductor bar of a rotating electrical machine with rectangular cross-section will result in an insulation system, which fulfills the typical requirements on a stator insulation of rotating electrical machines. For example, the method to apply such type of sleeves onto the outer periphery of conductor bars with rectangular cross-section of a rotating electrical machine are presently claimed.

It is respectfully asserted that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to apply the sleeve of the Admitted Prior Art in the specification of the present application to the conductor bar of Philofsky in the manner claimed because such solutions as known in the shrinkable sleeve art are not applicable to the conductor bar of Philofsky. Although we agree, that one reading the Philofsky reference as a whole would have appreciated that no criticality is placed on how the sheath is applied to the conductor bar, it would have also been appreciated that using the method of the Admitted Prior Art would not have succeeded in achieving the expected results, a well-insulated stator conductor bar, which fulfills the common requirements of rotating electrical machines.

Regarding claim 12, it should be said, that bending conductor bars is indeed necessary in order to enable the connection of single conductor bars to form the winding of a rotating electrical machine. But paragraph [0010] describes only that any bending of the conductors with already applied insulation layer would result in very strong mechanical stress and, even more critical, mechanical strain. Any

insulation, which should be applied to the conductor in advance of the bending, would necessarily need to survive this handling. We do not teach, that this variant of bending is known. And in fact, it is not. As the prior art teaches, any bending of the stator conductors has to be performed in advance, before having the insulation layer applied, before any insulation layer is applied. The common insulating tapes are wrapped around the conductor, after the conductor was bent into its final shape. Bending of the taped or even more critical the taped, impregnated and cured bar would result in a destructed and therefore unusable insulation layer.

Therefore, the preferred embodiment of the invention described in claim 12, which depends on claim 1, describes a method, which is new in the art of manufacturing stator bars for rotating electrical machines and is not anticipated by one of the citations.

There are no doubts that Roebel-transposed or non-Roebel-transposed arrangements are known and can be chosen by the designer of the machine. But this is not claimed in claim 15. Said claim describes a preferred embodiment of the method claimed in claim 13 or 14, wherein it is especially advantageous to have no Roebel-transposition in the involute, independent of the fact, whether the straight part of the conductor bar is Roebel-transposed or not. This is due to the fact, that bending the involute having already applied the insulation layer on the periphery of the bar is less complicated than having a Roebel-transposed involute section of the conductor. Anyway, it is still possible to bend also a Roebel-transposed involute section with applied insulation layer, but the designer has to take into account that the insulation layer limits the movability of the Roebel-transposed strand conductors, which limits the design of the Roebel-transposition mechanically. Taking this

limitation into account, it seems advantageous to not use a Roebel-transposition in the involute section. Taking this into account, it is respectfully asserted that the arguments of the Examiner are not persuasive.

Since all the remaining rejected claims depend from independent claim 1, the rejections of these claims is also respectfully traversed for at least the same reasons as presented above with respect to claim 1. Withdrawal of these rejections is also respectfully requested

Claims 4, 20, and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Philofsky*, the collective teachings of *Hennessey*, *Faust*, and *Watine*, and also *Anderson*, and also the Admitted Prior Art as applied to claim 2 above, and further in view of the collective teachings of U.S. Patent No. 4,135,553 to Evans (hereafter "*Evans*") and U.S. Patent No. 5,624,618 to Forman et al. (hereafter "*Forman et al.*") on the grounds set forth in paragraph 9 of the Official Action.

Regarding claim 4 we want to point out, that dissolving a support in a solvent is a completely different method (chemical) than melting a support by application of heat (physical method).

Beside this, Evans explains retaining arrangements, where an expanded elastomer tube is bonded on its outer surface to a restraint tube by a bond. The bond is created by adhesion or by using an additional adhesive. The restraint tube is removed after breaking the bond by any measure, to give the expanded elastomer tube the possibility to peel away from the outer retaining tube. The adhesive, if used, does not have any support function. The support function is only managed by the outer tube. The adhesive, if used, does also not have any function for bonding the

elastomer tube to the substrate, where it shrinks on. After or during shrinking of the elastomer, the support has to be removed in any way. It does not matter if it is removed by breaking the support, by peeling away, by dissolving or by melting. In any way it has to be removed as it can not be a part of the combination substrate-elastomer, as the support resides at the outside of the elastomer, will not improve the bonding to the substrate and will, in the case of melting the support, be a molten layer with random, uneven structure.

On the contrary, the method claimed in claim 4 describes a meltable support sleeve on the inner side of the shrink-on sleeve. By melting the support, the shrink-on sleeve will shrink to the periphery of the conductor bar, wherein the molten support material becomes an integral part of the arrangement, characterized in forming a smooth layer between conductor and shrink-on sleeve, which puts a smooth and continuous pressure on the molten support material.

The Examiner argues further, that it is also known to remove a polymer support from the material it is supporting by melting the support as an alternative to dissolving it in a solvent, as taught by Forman et al. (column 3, lines 17-18).

Regarding this, Applicants note that Forman et al. explains a method to manufacture hollow articles of braided composite parts (reinforced plastics). Forman et al. uses mandrels at the positions, where the complex structure should be hollow after curing the resin. In operation, the mandrels have no mechanical support function, as they are only placeholders like the sand in metal casting technology. After curing, Forman et al. removes the mandrels by melting or dissolving the mandrel material. This material is completely removed and has no function after curing the resin anymore. The cured composite material does not shrink after

melting or dissolving the mandrel material. This application does not have anything to do with the presently rejected claims.

Therefore, it would not have been obvious to the skilled artisan at the time the invention was made to remove the support from a shrinkable sleeve (Philofsky does not describe a shrinkable sleeve) by melting the support as such is not known from the collective teachings of Evans and Forman. Thus, Philofsky, the collective teachings of Hennessey, Faust, and Watine, and Anderson, and the Admitted Prior Art as applied to claim 2 (see arguments above) do not anticipate the preferred embodiment of the present invention as claimed in claim 4.

Regarding claim 20, this claim further develops claim 4 and describes an advantageous embodiment, which adds functionality to the end product, the insulated conductor. By making the support material conductive or semi-conductive, this does not influence the support function of the support sleeve at all, but after melting and building a thin smooth layer between conductor and insulation sleeve, this intermediate layer automatically forms an equipotential surface if the material is conductive or semi-conductive. As the outer surface of the molten support nestles to the inner surface of the shrink-on sleeve, delamination at the interface is avoided, electrical discharges are suppressed. Thus, the molten support material forms an optimum corona protection (see paragraph [0017] and [0040], last sentence each).

Thus, claim 20 does not describe choosing any polymeric material with any characteristics, but to equip the polymeric material of claim 4 with defined conductive or semi-conductive properties in order to add a desired electrical functionality, the protection against corona discharges. It is not obvious in view of the citations, even

to the skilled artisan, to use a polymer with conductive or semi-conductive characteristic for a support element.

Regarding claim 26, Applicants clarify that the conductor bars on their wide side form a surface with gussets, which have their origin in the rounded edges of the individual conductors, which form the conductor bar. Additionally the Roebel-transition forms large slits and pits, which cannot be filled by an elastic sleeve. Cavities would result without introducing a material that has at least plastic properties and is able to fill and level out such irregularities. The meltable polymer of the support sleeve provides such a material. This sleeve, when molten, is plastic or even liquid and is able to fill any voids on the surface of the conductor bar. After solidification this material of the support sleeve adheres and seals at the interface between conductor and shrink-on sleeve.

Following the arguments above, the rejection of claims 4, 20 and 26 is respectfully traversed. Further, since the rejected claims depend from independent claim 1, the rejections of these claims is also respectfully traversed for at least the same reasons as presented above with respect to claim 1. Withdrawal of these rejections is also respectfully requested.

Claims 7-9 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Philofsky*, the collective teachings of *Hennessey*, *Faust*, and *Watine*, and also *Anderson* as applied to claim 1 above, and further in view of U.S. Patent No. 4,589,939 to Mohebban et al. (hereafter "*Mohebban et al.*") on the grounds set forth in paragraph 10 of the Official Action.

Applicants again point out that what is claimed in the presently rejected claims is a special and new use of selected elements in order to generate a product with unique properties. Applicants do not claim the invention of these processes or the invention of products, which can be produced by these processes.

Applicants respectfully traverse the position that it would have been obvious to use any type of the known shrink-on sleeves on the conductor of Philofsky, following the arguments above. Thus, it would have been even less obvious to use a plurality of radially superimposed layers having different properties as presently claimed in, for example, claim 9.

The reliance on the disclosure in Mohebban is respectfully traversed. With the type of sleeve of prior art, like described by Mohebban, it is typically not possible to have prefabricated sleeves, which are capable to insulate long conductors of rectangular cross section for application conditions (heat, wear, vibration), as they are short in length, thick in wall thickness, have circular cross section arid special design for their use on predefined cable types. Therefore also prefabricated sleeves with a plurality of radially superimposed layers each have different properties.

With this and the arguments presented above with respect to the rejection of claim 1, we respectfully traverse the opinion of the Examiner that it would have been obvious for one of ordinary skill in the art to use a sleeve having a plurality of radially superimposed layers each having different properties on conductors for stator windings of rotating electrical machines. Accordingly, withdrawal of the rejection of claims 7-9 and 22 is respectfully requested. Further, since the rejected claims depend from independent claim 1, the rejections of these claims is also respectfully

traversed for at least the same reasons as presented above with respect to claim 1. Withdrawal of these rejections is also respectfully requested.

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Philofsky*, the collective teachings of *Hennessey*, *Faust*, and *Watine*, and also *Anderson* as applied to claim 1 above, and further in view of U.S. Patent No. 3,946,480 to Dienes (hereafter "*Dienes*") on the grounds set forth in paragraph 11 of the Official Action.

Regarding claim 10, the Examiner agrees that Philofsky is silent as to providing adhesive between the sheath (he does not mention any sleeve) and conductor bar. However the Examiner's further statements regarding the use of an adhesive is respectfully traversed.

Using an adhesive in an insulation process of Philofsky would be useless or even counterproductive, as any adhesive between the conductor and the tape (see arguments on Philofskys insulation process above) or between different layers of the tape, which are used to build up the insulation of Philofsky, would produce gas inclusions within the adhesive, which could not be removed by the vacuum-pressure impregnation in a later stage of the process. Thus the insulation quality would be worse than for the conventional process, where the impregnation resin bonds the tape automatically together or to the conductor, without having gas inclusions due to the fact, that the vacuum-pressure impregnation process does not allow any gas inclusions in the insulation.

Thus, the combination of the citations in view of Dieries is respectfully traversed as one of ordinary skill in the art at the time of the invention would not have

pursued the proposed modification for at least the above noted reasons. The rejection of claim 10 should therefore be withdrawn.

Since the rejected claim depends from independent claim 1, the rejection of this claim is also respectfully traversed for at least the same reasons as presented above with respect to claim 1. Withdrawal of the rejection is also respectfully requested for at least this further reason.

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Philofsky*, the collective teachings of *Hennessey*, *Faust*, and *Watine*, and also *Anderson* as applied to claim 1 above, and further in view of U.S. Patent No. 5,985,062 to Vallauri et al. (hereafter "*Vallauri et al.*") on the grounds set forth in paragraph 12 of the Official Action.

Vallauri et al. does not contribute to overcome the above noted deficiencies in the primary references. Thus, the rejection of claim 11 should be withdrawn. Also, since the rejected claim depends from independent claim 1, the rejection of this claim is also respectfully traversed for at least the same reasons as presented above with respect to claim 1. Withdrawal of the rejection is also respectfully requested for at least this further reason.

Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Philofsky*, the collective teachings of *Hennessey*, *Faust*, and *Watine*, and also the Admitted Prior Art as applied to claim 3 above, and further in view of U.S. Patent No. 4,585,607 to Krackeler (hereafter "*Krackeler*") on the grounds set forth in paragraph 13 of the Official Action.

Applicants note that claim 19 depends from claim 3 which depends from claim 2 which depends from independent claim 1. In present claim 2, the shrink-on sleeve is mechanically dilated arid positioned around an outer periphery of a support sleeve. This means, the support sleeve is positioned at the inner interface of the shrink-on sleeve.

Opposite to this, the reference of Krackeler, cited by the Examiner, shows clearly, that the dilated element is bonded to an inner surface of a support means. This means, in one of the solutions of Krackeler the bonded helical opening of the support is realized at the outside of the shrinkable element whereas in the present claim the helical opening is realized at the inside of the shrinkable element with the need to remove the developing strips through the inside of the leaving part of the support. An additional difference distinguishing the present claim is that Krackeler describes a support and shrink element, which both have circular cross section, whereas the support and shrink-on sleeve of the present claim both have rectangular cross section.

Finally and in contrast to the prior art, the present application mounts the support sleeve on stator bar conductors, which have rectangular cross section and should be covered by a sleeve with a rectangular cross section resulting in a support sleeve with also rectangular cross section, which is new in the art of shrink-on technology.

For at least the above reasons, the rejection should be withdrawn. Further, since the rejected claim depends from independent claim 1, the rejection is also respectfully traversed for at least the same reason as presented above with respect to claim 1. Withdrawal of the rejection is also respectfully requested

Additional comments on the present claims and the rejections are presented below:

Applicants disagree with Examiner's assertion that the use in Philofsky of mica tape is mere speculation. In Fig. 3 Philofsky clearly depicts, that a tape is used to insulate the conductor in the typical spiral wrapping way as known from the stator winding art. The documents transmitted in the April 19, 2004 IDS show that this technology was state of the art for applying main insulation of conductors for dynamoetectric machines at the time Philofsky's invention was applied for.

Applicants again point out, that Philofsky does not describe any invention concerning the insulation of a stator winding of a rotating electrical machine. He only claims an invention on cooling means for the conductor of a stator winding. Therefore it is not speculation to assume, the winding insulation of the machine disclosed in Philofsky is of the same type as contemporaneously used at Westinghouse Electric Corporation, to whom Philofsky assigned his patent, and as it is used by all manufacturers at the time the invention was made and even until today.

If the Examiner insists on the opinion, that it was speculation to assume the insulation in Philofsky is a winding insulation of the state of the art at the time of the application by Philofsky, it is respectfully requested that the Examiner support this assertion with a publication, which describes any other state of the art solution to realize the insulation of stator bars of a dynamoelectric machine of the type described by Philofsky.

Finally, it is respectfully submitted that there is no motivation by one of ordinary skill in the art for the proposed combinations in the Official Action. A person skilled in the art of cable insulation technology would not have thought about using sleeves with rectangular cross section on the round cross section cable. Further, the person skilled in the art of cable insulation technology would not have come to the conclusion it would be advantageous to use support sleeves with rectangular cross section. On the other hand, a person skilled in the art of stator winding insulation would not have come to the conclusion that it would have been advantageous to use sleeves with circular cross section as known from cable technology with a support sleeve with circular cross section on the rectangular conductor of a stator bar. Only the new combination described by the present application of having a sleeve with rectangular cross section, supported by a support sleeve with rectangular cross section on the stator bar makes sense and this combination is not disclosed, taught or suggested in any of the present rejections. Accordingly, withdrawal of the rejections is respectfully requested.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: January 6, 2005

By: _____
Jeffrey G. Killian
Registration No. 50,891

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620